

United States Department of Agriculture
Natural Resources Conservation Service

NRCS Programs Supporting Biofuel Production

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Obama Administration Emphasis

- Presidential Directive to accelerate biofuel investment and production
- Biofuels Interagency Working Group
 - Co-Chairs:
 - **Secretary of Agriculture**
 - Secretary of Energy
 - EPA Administrator
- Funds in Recovery Act and 2008 **Farm Bill**

Secretary of Agriculture Vision

- *"If we're going to turn this economy around and become less reliant on fossil fuels we've got to create more biofuel...."*
- *"As congress begins a discussion, a debate about energy policy and climate change, agriculture has to be there, has to be engaged...."*

- Secretary Tom Vilsack, Feb 26, 2009

NRCS and Sustainable Biofuel Production

- Farm Bill Implications
- Energy Technology Development Team
- Hawaii Plant Materials Center's Role
- Conservation Practices for Sustainable Ag

2008 Farm Bill Energy Implications

Energy provisions are found in at least 9 titles:

- Conservation, Title II
- Rural Development, Title VI
- Research and Related Matters, Title VII
- Forestry, Title VIII
- Energy, Title IX
- Livestock, Title XI
- Crop Insurance, Title XII
- Miscellaneous, Title XIV
- Trade and Tax Provision, Title XV

2008 Farm Bill Energy Implications

Conservation Title (Title II)

- Environmental Quality Incentives Program
 - NRCS has historically promoted conservation practices through EQIP.
 - Purposes expanded to include energy conservation and fuels management.
 - Practices have been developed that specifically address erosion control of biofuels crops.
 - Conservation Innovation Grants (CIG)
 - FY09 – Bioenergy & Biomass 6 Projects \$1.8 million

2008 Farm Bill Energy Implications

Conservation (Title II) (cont'd)

– Conservation Reserve Program

- Allows managed harvesting of biomass crops according to appropriate vegetation management requirements and specified harvesting periods.....
- Need to develop specifications to ensure environmental conservation concerns are addressed.

2008 Farm Bill Energy Implications

Energy (Title IX)

- Biomass Crop Assistance Program (BCAP)
 - *Provides assistance to eligible biorefineries and producers to encourage development of advanced biofuels (e.g., cellulosic ethanol)*
 - *Includes subsidies for production of biomass crops in selected project areas – may require conservation plans*
- Renewable Fertilizer Study
 - *Requires study to be completed in 2009 that evaluates the potential for producing fertilizer from renewable energy sources in rural areas*
- NRCS is coordinating with Rural Development on REAP projects and is developing conservation plans for BCAP.

Natural Resources Conservation Service (NRCS)

Helping people help the land

- Began during the dustbowl era as the SES
- Providing technical and financial assistance to private landowners
 - Develop Conservation Plans
 - Administer Farm Bill Programs
 - Plant Materials Program

NRCS Technology Development Teams

The Energy Team

- Strategic Plans (Department, Agency, Team)
- Energy Initiative Implementation Plan (aka Energy Action Plan)
- Development and delivery new technology
- Development and delivery of related training courses

NRCS Plant Materials Centers

- **Fiscal Year 2010 – Biomass Development \$550,000**
Plant Materials Centers select feedstock plants, develop innovative planting technology, and release new and improved varieties.
- The network of 27 PMC are uniquely positioned to field-test and refine recommendations based on local climate and soils variables on various plant varieties.
- The PMCs have the land resources, scientific infrastructure and expertise, and 70 years of hands-on experience in conducting the types of studies needed to develop and promote energy related solutions using plant materials.

National PMC Action Plan for Energy Conservation

- Evaluation of plants having potential feedstock applications in biomass energy applications
- Evaluation of biomass energy crops for adaptation to new regions and potential invasive characteristics.
- Identification and demonstration of agronomic practices to obtain maximum productivity and quality of harvested feedstock.
- Identification and evaluation of potential environmental impacts by measuring biophysical plant attributes associated with specific production systems.
- Identification and evaluation of biomass energy plants for adverse or beneficial impact on adjacent crop.

Hawaii PMC - Molokai

- *Pennisetum* sp. (PM Hybrid) - A hybrid Napiergrass developed by the PMC in the early 1990s as a combination biofuel plant, windbreak, and forage for cattle.
- The napier hybrid grass is a potential candidate because of its high biomass yields, rapid growth, and non invasive (sterile) attributes.
- The HI PMC has just started working with Hawaii Agricultural Research Center, (HARC) and the University of Hawaii on the potential use of a napier hybrid grass for biofuel studies.



Guidelines for Biofuels Crop Production

What amount can be sustainably grown and harvested?

A conservation plan would consider:

- tillage practices
- crop selection, rotation
- soils
- slopes
- climate

Questions?

Aloha

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